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John Coogan

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RECORD OF ORAL HEARING  
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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JOHN COOGAN, JUSSI HEIKKOLA,  
and SIMO SANERMA

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Appeal 2009-3305  
Application 09/857,688  
Technology Center 3700

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Oral Hearing Held: April 7, 2009

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Before JENNIFER D. BAHR, JOHN C. KERINS, and MICHAEL W.  
O'NEILL, *Administrative Patent Judges*.

APPEARANCES:

ON BEHALF OF THE APPELLANT:

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P R O C E E D I N G S

MS. SPECTOR: Good afternoon. My name is Elaine Spector and I'm representing the Applicant in this case. I understand that the Board is familiar with the facts, so we can just move on to the key points in this case.

I'd like to start with the claim language. And, really, the background of the invention is pertaining to a method for correcting the positional errors in rock drilling equipment. Essentially, there's a carry or truck and a boom attached to it which is rotatable about that joint. At the end of the boom is a drilling rig. And because of those loose joints in the connections, various connections of the boom, particularly -- one example would be at the location between the carrier and the base of the boom, there's, I guess -- because we need accurate drilling in the particular location, this is a method and apparatus that helps position the boom correctly. And the way that's done is through obtaining deviations prior to the actual operation of the machinery. And it's accomplished through turning the boom through incremental turning angles and measuring those particular deviations. Those deviations are then used in the subsequent drilling operation as correction values. Now the claims, each of the claimed method and apparatus claims recite those features in various forms.

Now the primary reference relied upon as a 102 rejection is Rinnemaa. And it looks like from the language used by the Examiner that this is an inherency rejection. Now, Rinnemaa relates to correcting errors in rock drilling equipment, but Rinnemaa uses sensors located along the feed beam. People had used, I guess, in the past, one sensor on a particular feed beam to try to correct positional data. And because of the various

1 movements in the X and Y plane, they needed a second sensor, and those  
2 sensors would coordinate together to correct the positional -- the position of  
3 the particular feed beam.

4 What Rinnemaa fails to disclose is this operation prior, which is  
5 turning the boom through incremental turning angles and then measuring  
6 those deviations and then using those deviations in a subsequent operation.  
7 There's no disclosure in Rinnemaa either inherently or explicitly that such  
8 deviations are disclosed.

9 And the reason that the invention focuses on it, explained in the  
10 background in the specification, is that some of the greatest positional errors  
11 occur because of the loose joints. And by focusing in on determining what  
12 those are beforehand, what those deviations are beforehand, they can better  
13 position the boom in later operations.

14 JUDGE O'NEILL: Can you explain what's going on in Figure 2 a  
15 little bit clearer than --

16 MS. SPECTOR: Figure 2 of our application?

17 JUDGE O'NEILL: Yes.

18 MS. SPECTOR: Okay. I'll attempt. Okay. Now Figure 2 relates to,  
19 I guess, different types of error values between adjacent turning angles.  
20 Yeah, Figure 2 can -- I guess, there's, I guess, a specification described  
21 starting on page 6 to page 7. Is there a particular question about Figure 2  
22 that I could help you with that wasn't clear in the specs that I could --

23 JUDGE O'NEILL: Well, I know that you cited to, basically,  
24 paragraph 14 in your specification for the -- to show the where the claims  
25 have support in the spec. But we were trying to figure out some -- maybe

1 you can elaborate on what actually is being shown in Figure 2. Because we  
2 couldn't understand what the alphas meant -- maybe that's a change in error.

3 MS. SPECTOR: I think that's a -- to me, from what I see, and, you  
4 know, I have the same spec, it looks like the deviation. That would be the  
5 deviation along various points. So if you have the vertical line, that would  
6 be a particular point. So during the first turn, the deviation would be a  
7 positive deviation. At the second one, you would see at the second  
8 measuring point there's a negative deviation. So it looks like it goes up and  
9 down. And then the bottom part of Figure B is picking some kind of  
10 probable value between the measurements of -- as defined in A and putting  
11 them into Point B. And that's the way I understand it.

12 JUDGE O'NEILL: You're going to have to repeat that. What are the  
13 vertical marks supposed to be?

14 MS. SPECTOR: The vertical marks, I would say -- the vertical marks  
15 are indicating various measurements. So that at different points along -- I  
16 mean, we would -- I mean, the claims say a first set of -- measuring a first  
17 set of deviations. So I understand Figure A to be, okay, what are those  
18 deviations? At that first point above, that would be the first measurement.

19 JUDGE BAHR: So then one angle of one of the joints?

20 MS. SPECTOR: Yes.

21 JUDGE BAHR: Okay.

22 MS. SPECTOR: Yes.

23 JUDGE BAHR: And then in the second segment there, that's another  
24 angle increment of the angle a little bit?

25 MS. SPECTOR: Yes.

1 JUDGE BAHR: And then how much is it offset.

2 MS. SPECTOR: The way I understand it, yes. Yes.

3 JUDGE O'NEILL: Now getting to claims, you said this was a method  
4 and apparatus.

5 MS. SPECTOR: Yes.

6 JUDGE O'NEILL: And you argue -- a lot of your arguments are  
7 focusing on the method processes.

8 MS. SPECTOR: Sure.

9 JUDGE O'NEILL: So but let's move to apparatus claims, which are  
10 Claims 19 and 34 --

11 MS. SPECTOR: Sure.

12 JUDGE O'NEILL: -- and explain to us how Claims 19 and 34 define  
13 over the Rinnemaa reference.

14 MS. SPECTOR: Sure. Okay. Both Claims 19 and 34 define two  
15 aspects. One's a memory device for storing those first set of deviations and  
16 another is a calculating device, which actually uses those stored deviations  
17 to determine a positional correction. I think that the main focus is the  
18 calculating device, which would -- one having ordinary skill in the art would  
19 understand to be some type of software program that basically is used on  
20 computer that's used, some kind of calculating device. It has to have a  
21 certain software program that can use these values and calculate that kind of  
22 data. So, certainly, the reference in Rinnemaa does -- would not have those  
23 features of that particular software, and also the memory device for storing.  
24 So I don't think that's as strong, because it says for storing; it didn't say it  
25 stored the values. Certainly, I think the calculating device is something

1 that's different. Because we're actually having a program that -- I mean, a  
2 program that uses those first set of stored values and determining those  
3 correctional positions.

4 JUDGE O'NEILL: Now, before -- just going back to the memory  
5 device. I'm having difficulty reconciling -- we have a memory device for  
6 storing that first set of deviations and then we continue on with the language  
7 and then we have a conjunctive and and then it says, "and measuring using a  
8 movement sensor for each of said intervals." What are we -- how are we  
9 supposed to construe this measuring or using language? Is that part of the  
10 memory device or is that something separate?

11 MS. SPECTOR: Let me see. Is that repeated in Claim 34?

12 JUDGE O'NEILL: Well, let's just focus on Claim 19.

13 MS. SPECTOR: Okay.

14 JUDGE O'NEILL: Then we'll --

15 MS. SPECTOR: Okay. Just one second. This is an apparatus claim  
16 and I would interpret that phrase to be part of the storage. The memory  
17 device would store the measurements from the movement sensor.

18 JUDGE O'NEILL: So it's going to store the measurements?

19 MS. SPECTOR: Yes. So it's for storing a first set of deviations and  
20 then for storing the measuring using a movement sensor.

21 JUDGE O'NEILL: For storing measuring -- all right. So now moving  
22 to 34, we can just -- is that going to be your position as well with 34?

23 MS. SPECTOR: That's correct.

24

25

1 JUDGE O'NEILL: So you're going to hang your hat -- pardon the pun  
2 there -- on again believe that the Rinnemaa reference -- your Claim 34 is  
3 distinguishable from Rinnemaa based upon the calculating device?

4 MS. SPECTOR: Yes.

5 JUDGE O'NEILL: And the calculating device is software/computer;  
6 that's how one of ordinary skill in the art would recognize it?

7 MS. SPECTOR: Right.

8 JUDGE O'NEILL: And also, do we have an understanding that the  
9 measuring is actually within the memory device; it's a memory device for  
10 storing and for storing the measuring?

11 MS. SPECTOR: Correct.

12 JUDGE O'NEILL: Okay.

13 MS. SPECTOR: It's an apparatus claim, so I think that the key  
14 features are the memory device and the calculating device.

15 JUDGE KERINS: Okay. Counsel, is there a definition specification  
16 or an example that shows us what a calculating device -- contemplated?

17 MS. SPECTOR: I looked at the specification and did not find  
18 anything specifically. But, certainly, I think someone having ordinary skill  
19 in the art would understand that any kind of computation device, computer  
20 and/or software could be used to make those calculations.

21 JUDGE BAHR: Okay. I think we understand the issues.

22 MS. SPECTOR: Okay.

23 JUDGE BAHR: Do you have any more questions?

24 JUDGE O'NEILL: I have none.

25 JUDGE BAHR: We don't.



1 MS. SPECTOR: Okay. Thank you.

2 JUDGE BAHR: Thank you. Oh, do you have a business card for the  
3 reporter?

4 (Whereupon the proceedings were concluded at 1:15 p.m. on April 7,  
5 2009.)

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